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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/709,830	11/09/2000	Robert j. Duncan	0270157	3595

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PILLSBURY WINTHROP LLP
2475 HANOVER STREET
PALO ALTO, CA 94304-1114

EXAMINER

VU, THONG H

ART UNIT	PAPER NUMBER
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2142

DATE MAILED: 02/17/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/709,830

Applicant(s)

DUNCAN ET AL.

Examiner

Thong H Vu

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 November 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-44 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-44 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input checked="" type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

1. Claims 1-44 are pending.

Claim Rejections - 35 USC § 112

2. Claims 18-21,24,25,28-31 and 34 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claims 18-21,24,25,28-31 and 34, the word "means" is preceded by the word(s) "comprising/comprises" in an attempt to use a "means" clause to recite a claim element as a means for performing a specified function. However, since no function is specified by the word(s) preceding "means," it is impossible to determine the equivalents of the element, as required by 35 U.S.C. 112, sixth paragraph. See *Ex parte Klumb*, 159 USPQ 694 (Bd. App. 1967).

3. Claim 43 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention (i.e.: the forward plane is not defined in specification).

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

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(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-4,6-14,18-42,44 are rejected under 35 U.S.C. § 102(e) as being anticipated by Parthasarathy et al [Parthasarathy, 6,347,398 B1]

4. As per claim 1, Partharathy discloses a method for performing a service on a network device, comprising the steps of

installing the service on the network device from another location [Parthasarathy, install software components, col 9 lines 32-53], the service having a corresponding set of service relationships [Parthasarathy, a set of software components, col 4 lines 55-63];

checking the service relationships of the loaded service against a stored registry of relationships [Parthasarathy check software registered and installed, col 13 lines 27-41];

causing the service to be executed on the network device if the service relationships can be resolved [Parthasarathy, launched automatically, col 25 line 16-col 26 line 12].

Claims 18,35 contain the similar limitations set forth of apparatus claim 1. Therefore, claims 18,35 are rejected for the similar rationale set forth in claim 1.

5. As per claim 2, Partharathy discloses the step of updating the stored registry of relationships with information corresponding to the executed service [Partharathy, overwritten an out-of date version, col 27 lines 15-25]
6. As per claim 3, Partharathy discloses the step of causing the service to be executed includes the step of providing instructions corresponding to the service to a virtual machine that is ported to the network device [Parthasarathy, launched automatically, col 25 line 16-col 26 line 12].
7. As per claim 4, Partharathy discloses of causing another service to be executed on the network device in accordance with a result of the step of checking the service relationships [Parthasarathy, launched automatically, col 25 line 16-col 26 line 12].
8. As per claim 6, Partharathy discloses the network device comprises a packet switching fabric [Partharathy, firewall, col 9 lines 32-53].
9. As per claim 8, Partharathy discloses the step of communicating with a remote client to receive an identifier corresponding to the service to be performed.
10. As per claim 9, Partharathy discloses the another location corresponds to an application server that stores a plurality of services [Partharathy, Internet resources, col 7 lines 3-25].

11. As per claim 10, Partharathy discloses the another location corresponds to an application server that stores a plurality of services, and wherein the identifier comprises a URL pointing to the application server [Partharathy, URL, col 8 lines 20-35].

12. As per claim 11, Partharathy discloses the step of installing includes the step of downloading a file corresponding to the service from the application server in accordance with the URL [Partharathy, col 8 lines 47-54].

13. As per claim 12, Partharathy discloses the step of downloading includes the step of communicating with the application server using the HTTP protocol [Partharathy, col 15 lines 30-47].

14. As per claim 13, Partharathy discloses the step of communicating includes the step of providing a telnet interface that allows the remote client to provide the identifier in association with a predefined command requesting the service to be performed [Partharathy, FTP server, col 15 lines 39-47].

15. As per claim 14, the step of interfacing with embedded hardware and software to perform tasks associated with the service [Partharathy, col 6 lines 34-44; col 28 lines 47-62].

16. As per claim 44, Partharathy discloses a method for updating one of a plurality of functionalities of a network device, comprising the steps of

providing a service environment that executes in a runtime environment of the network device [Parthasarathy, run-time parameters, col 24 line 51-col 25 line 7];

providing code corresponding to the updated one of the functionalities to the service environment from another location on a network coupled to the network device [Parthasarathy, updated components, col 23 lines 1-39];

providing header information indicating relationships required by the updated one of the functionalities to the service environment [Parthasarathy, HTTP header, col 15 lines 30-37]; and

executing the code corresponding to the updated one of the functionalities if the required relationships can be resolved by the service environment [Parthasarathy, launched automatically, col 25 line 16-col 26 line 12].

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 5,15-17,43 are rejected under 35 U.S.C. § 103 as being unpatentable over Parthasarathy et al [Parthasarathy, 6,347,398 B1] in view of Sidey [5,954,797].

17. As per claim 43, Parthasarathy discloses a network device for locally performing a service, comprising:

a control plane including:

an embedded CPU and operating system [Parthasarathy, CPU and operating system, col 4 lines 17-63]

a service environment ported to the embedded CPU and operating system [Parthasarathy, the memory stored a set of applications, col 4 lines 55-63], the service environment having:

a network interface adapted to install the service on the network device from another location [Parthasarathy, modem or network card, col 4 lines 45-54], the service having a corresponding set of service relationships [Parthasarathy, the software components, col 2 line 58-col 3 line 21; col 8lines 10-65]

a registry of service relationships [Parthasarathy, software components are registered, col 9 lines 32-53],

a service manager coupled to the network interface and the registry that is adapted to check the service relationships of the loaded service against the registry [Parthasarathy, verify the installed software component, col 9 lines 32-54; col 10 lines 15-27;col 13 lines 27-41;col 20 lines 5-19;cool 24 lines 51-60] and

a service launcher coupled to the service manager that is adapted to cause the service to be executed on the network device if the service relationships can be resolved [Parthasarathy, launched automatically, col 25 line 16-col 26 line 12],

However Parthasarathy does not detail

a forwarding plane (i.e.: forward trap) including a packet switching fabric (i.e.: router), the service environment being operable in the control plane without interruption of the forwarding plane.

A skilled artisan would have motivation to improve the communication of managed node and found Sidey teaching. Sidey discloses a network management system wherein the managed node includes a switching fabric [Sidey, a managed node is a router, col 4 lines 9-15] which is directed by the forward traps [Sidey col 4 lines 25-33]. It was clearly that the processing unit direct the forward trap included switching fabric (i.e.: the router ports or switch ports) without interruption the software components operation which is a different program provided other service.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate the managed node including a router function and network management software such as SNMP as taught by Sidey into the Parthasarathy's apparatus in order to utilize a network device with a set of software components. Doing so would provide a dynamic download, install and management service to the network devices.

18. As per claim 5, Parthasarathy-Sidey disclose the network device is one of a router, a switch, and a hub [Sidey, a managed node is a router, col 4 lines 9-15].

19. As per claim 7, Parthasarathy-Sidey disclose the network device comprises a control plane and a forwarding plane including the packet switching fabric [Sidey, a

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managed node is a router, col 4 lines 9-15], the loading, checking and causing steps being performed in the control plane without interruption of the forwarding plane [Sidey col 4 lines 25-33].

20. As per claims 15,16 Parthasarathy-Sidey disclose the service comprises accessing a MIB on the network device [Parthasarathy, registry database, col 9 lines 32-53].

21. As per claim 17, Partharathy-Sidey disclose the step of interfacing with embedded hardware and software to cause forwarding rules referred to by the packet switching fabric to be adjusted [Sidey, col 8 lines 65-col9 lines 11, col 10 lines 39-53].

22. Any inquiry concerning this communication or earlier communications from the examiner should be directed to examiner Thong Vu, whose telephone number is (703)-305-4643.

The examiner can normally be reached on Monday-Thursday from 8:00AM- 4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, *Jack Harvey*, can be reached at (703) 305-9705.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 305-9700.

Any response to this action should be mailed to: Commissioner of Patent and Trademarks, Washington, D.C. 20231 or faxed to :

After Final (703) 746-7238

Official: (703) 746-7239

Non-Official (703) 746-7240

Hand-delivered responses should be brought to Crystal Park 11,2121 Crystal Drive, Arlington. VA., Sixth Floor (Receptionist).

Thong Vu
Patent Examiner
Art Unit 2142

